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NASA Procedural Requirements

COMPLIANCE IS MANDATORY**NPR 2800.2**Effective Date:
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Request Notification of Change

(NASA Only)

Subject: Electronic and Information Technology Accessibility**Responsible Office: Office of the Chief Information Officer**[| TOC](#) | [Preface](#) | [Chapter1](#) | [Chapter2](#) | [Chapter3](#) | [AppendixA](#) | [AppendixB](#)
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Chapter 2. Requirements

2.1. Procurement of EIT

2.1.1 In acquiring, developing, maintaining, and using EIT, NASA shall comply with the provisions of Section 508 of the Rehabilitation Act of 1973, as amended. These provisions state that individuals with disabilities, either Federal employees or members of the public, will have access to and use of information that is comparable to those without a disability. Software applications and operating systems, Web-based information, systems or applications (Internet, Intranet, or Extranet), telecommunications products, video and multimedia products, self-contained, closed products, and desktop and portable computers developed, procured, or maintained on or after June 25, 2001, must be Section 508 compliant.

2.1.2 Federal Acquisition Circular (FAC) 97-27, Electronic and Information Technology Accessibility, modified the Federal Acquisition Regulations (FAR) to describe requirements for the procurement of EIT that is consistent with Section 508. These requirements included conformance of procured supplies and services with the Access Board accessibility standards, among other stipulations. NASA PIC 05-01 provides guidance to NASA in implementing the FAR changes contained in FAC 97-27. PIC 05-01 applies to the procurement of both EIT supplies (such as computers, telephones, etc.) as well as services (e.g., development of a computer system for NASA use, publishing information on a NASA Web site). All NASA procurements shall adhere to the requirements of NASA PIC 05-01. Procurements made on or after June 25, 2001, are subject to compliance with Section 508. The standards are to be applied prospectively and do not require NASA to retrofit EIT implemented prior to June 25, 2001.

Maintenance and support for legacy systems, purchased or developed prior to June

2001, does not generally establish a requirement that the legacy system conform to the technical standards. If the maintenance is covered under a contract awarded prior to June 25, 2001, the procurement provisions of Section 508 might not be applicable. Patches to fix software errors on a system that is not near the end of its life expectancy, and system upgrades that could not operate with software that meets the applicable technical provisions of the Access Board's standards, would not require that the system become conformant. However, system owners should make every reasonable effort to address conformance with the technical standards. If a system is near the end of its life expectancy, the purpose of the 'maintenance' is to significantly upgrade and update the system, and the resources are available for such an upgrade, the relevant technical 508 standards apply.

2.1.3 It is the responsibility of the requiring office to ensure all products procured comply with Section 508 prior to deployment. Relying on vendor assurances alone is not sufficient. Requiring offices may perform conformance testing or may rely on analyses of Section 508 conformance performed by other NASA offices; guidance from the local Section 508 Coordinator; NASA contractors who did not develop the product or service; other Federal, state, or local agencies; independent testers such as universities, accessibility advocacy groups; and other parties not directly involved with the development/sale of the product or service who may be relied upon for a conformance determination.

2.2 Technical and Functional Criteria for Compliance with Section 508 of EIT Developed, Maintained, and Used by NASA

2.2.1 The development, maintenance, and use of all NASA EIT shall comply with the technical and functional criteria (accessibility standards) set forth in the Section 508 Final Rule published by the Access Board in the Federal Register (36 CFR Part 1194, December 21, 2000) and effective as of June 25, 2001. The accessibility standards may be found at <http://www.access-board.gov/508.htm> and apply to EIT developed and maintained both by NASA civil servants and by NASA contractors for use by employees of NASA, employees of other Federal agencies, and/or the public.

2.3 Special Topics

2.3.1 Electronic Documents

2.3.1.1 Official communication shall be made accessible to persons with disabilities. Official communication refers specifically to communication by a Federal agency to employees that contains information necessary for those employees to perform their job functions, or communication by a Federal agency to members of the general public that contains information necessary for the conduct of official business with the agency. Examples of such electronic content may include e-mail messages, Word documents, .pdf documents, and other types and formats. If attempting to disseminate time-sensitive information that is not compliant with Section 508, a text-based disclaimer will be attached to all correspondence stating "For an accessible version of this material, please contact [NASA Civil Servant Document Owner], [Organization of Document Owner], [Phone]." Request for an accessible version will be expedited within twenty working days of the original appeal.

2.3.1.2 Broadcast e-mails and e-mails generated by Web applications will comply with the applicable Section 508 technical standards. Broadcast e-mails, as defined in this

standard, are those e-mails sent:

- a. By a NASA civil servant, contractor, or appointee to any group or list comprised of persons, some of whom are not personally known to the sender, or
- b. As final documents intended for distribution to other Federal officials or to members of the public seeking information and services.

2.3.1.3 Electronic documents created and stored on individual workstations are not required to comply with Section 508 accessibility standards.

2.3.2 Laboratory Equipment

2.3.2.1 In the case of the procurement of laboratory equipment, any EIT that is included in the procurement as part of the laboratory equipment, regardless of whether the EIT is the end product of the procurement or the principal function of the laboratory equipment, shall conform to Section 508 requirements. EIT may be included in the procurement of the laboratory equipment either as embedded in the equipment or as a separate component. For example, full-featured oscilloscopes available in the marketplace today often include an embedded microprocessor that may run the Windows[®] operating system; be controlled by a touch screen, keyboard, and mouse; have Internet connectivity; and run a myriad of software applications, including e-mail. Such an oscilloscope is EIT and subject to Section 508, though not all of the Section 508 standards are applicable. Each type of laboratory equipment must be addressed individually and a determination made by the local Requiring Office (market research).

2.3.3 Complex Graphics

2.3.3.1 § 1194.22(a) of the Access Board Standards requires that, for Web-based intranet and internet information and applications, a text equivalent for every non-text element be provided. In the case of complex graphics embedded in Web pages or Web-posted documents, it may be difficult or impossible to completely describe a graphic in text. In such a case, the text description shall provide a meaningful, high-level description of the information conveyed by the graphic and, if feasible, a point of contact who may provide additional information. In providing the high-level description associated with the graphic, the content developer must keep in mind the intended audience for the Web page or document. As an example, content targeted at the scientific community would require a very different description than that targeted at the general population.

2.3.4 Complex Equations

2.3.4.1 Complex equations included in Web pages and embedded in Web-posted documents pose challenges to accessibility similar to those of complex graphics since they often are formatted as graphics. While there are tools that may potentially increase the accessibility of complex equations (and also graphs), the Agency has not yet evaluated the practicality of using those tools as standard practice in the Agency. Until such a determination is made, complex equations, which are formatted as graphics and embedded in Web pages or Web-posted documents, shall adhere to the same requirements as those for complex graphics.

2.3.5 Broadcast Materials

2.3.5.1 Video and Multimedia Products are of particular importance with regard to all written, graphical, or broadcast video materials or products produced for NASA (to

include training). 36 CFR Part 1194.41 outlines the requirements supporting services for products accommodating the communication needs of end users with disabilities. The originating office shall ensure all multimedia produced and disseminated by NASA complies with the applicable technical standards, including all formats -- live or recorded over the air broadcast, live or recorded Web multimedia (such as video podcasts, Webcasts, Flash, or other animation), and CD or DVD. Conformance with the standards for multimedia would include open or closed captioning of audio and an audio description of video.

2.4 Applicability and Exceptions

2.4.1 FAC 97-27 specifies situations in which compliance with Section 508 and the Technical Standards is not required. Further, FAR Part 39.204 defines situations in which compliance with Section 508 is not required if an exception exists. Neither the Section 508 statute nor regulations permit deviations to Section 508 requirements beyond the exceptions described below.

2.4.2 Exceptions to Section 508

2.4.2.1 EIT acquisitions, to include new procurements as well as software developed and/or maintained by NASA, are not required to meet the technical standards if the acquisition is:

- a. a national security system;
- b. EIT acquired by a contractor incidental to a contract (i.e., for use by its own employees and not for the Government or members of the public);
- c. EIT located in spaces frequented only by service personnel for maintenance, repair, or occasional monitoring of equipment; or
- d. Instances where compliance would impose an undue burden.

(1) Undue burden has been defined by the FAR in the context of procurements, but the same concept applies to EIT which is developed and maintained by NASA. FAR Subpart 39.2 defines undue burden as a significant difficulty or expense. FAR Subpart 39.204(e)(1)(ii) requires that in determining undue burden, an agency must consider all resources available to the program or component for which the EIT is being acquired. Therefore, undue burden cannot be established by simply stating that a compliant solution "costs too much" or is more expensive than a noncompliant solution. If an undue burden exception is granted, the information and data specific to the EIT shall be provided to individuals with disabilities by an alternative means of access. The Center legal counsel must concur on any undue burden determination.

e. Location Specificity (1) When agencies provide public access to information through EIT, agencies are not required to make products owned by the agency available for access and use by individuals with disabilities at a location other than where the electronic and information technology is provided to the public, or to purchase products for access and use by individuals with disabilities at a location other than where the electronic and information technology is provided to the public. f. Commercial Non-availability

(1) When procuring a product, the Agency will procure products which comply with the provisions in Section 508 Technical Standards when such products are available in the

commercial marketplace or developed in response to a Government solicitation. Agencies cannot claim a product as a whole is not commercially available because no product in the marketplace meets all the standards. If a commercially available product meets some but not all of the standards, the Agency must procure the product that best meets the standards.

g. Fundamental Alteration

(1) Applies to a change in the fundamental characteristic or purpose of the product or service, not merely a cosmetic or aesthetic change. For example, an agency intends to procure pocket-sized pagers for field agents for a law enforcement agency. Adding a large display to a small pager may fundamentally alter the device by significantly changing its size to such an extent that it no longer meets the purpose for which it was intended, that is to provide a communication device which fits in a shirt or jacket pocket.

2.4.2.2 Exceptions to the procurement of NASA EIT shall conform to the requirements of NASA PIC 05-01, which provides Agency guidance to ensure procurements are conducted in a way that meets the requirements of Section 508. To request an exception, the Program/Project Manager must complete steps identified in Section 2.5.

2.5 Applying for Exceptions to Section 508 Technical Standards

2.5.1 Exceptions to Section 508 policies, procedures, standards, or requirements shall be granted in accordance to each Center's implementation process for Section 508 enforcement.

2.6 The exception request shall include:

a. Details with regards to the portion of Section 508 applied to the exception to include the reason/justification and may incorporate:

- (1) Risk Assessment;
- (2) Cost-Benefit Analysis;
- (3) Business Impact Assessment;
- (4) Identification of compensating controls/actions;
- (5) Proposed period of time for the exception (if applicable);
- (6) Voluntary Product Accessibility Template (VPAT);
- (7) The proposed date by which the EIT will be compliant with Section 508 Technical Standards and/or Federal requirements; and
- (8) Identification of compensating controls/actions (i.e., screen readers, sign language interpreters), if applicable.

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